



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

East Building, PHH-23
1200 New Jersey Ave, SE
Washington, D.C. 20590

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0043/S-96, REVISION 15

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - Monsanto Research Corporation Model 2720 Series.
2. Source Description - The sources described by this certificate are cylindrical double encapsulations constructed of stainless steel with welded closures and with the dimensions indicated in the following table:

Model Number	Outside Diameter mm (inches)	Length mm (inches)
2721 A, B, or C	12.7 (0.50)	12.7 (0.50)
2722 A, B, or C	12.7 (0.50)	17.8 (0.70)
2723 A, B, or C	19.1 (0.75)	22.1 (0.87)
2724 A, B, or C	25.4 (1.00)	28.4 (1.12)
2725 A, B, or C	25.4 (1.00)	38.1 (1.50)
2726 A, B, or C	25.4 (1.00)	50.8 (2.00)
2727 A, B, or C	38.1 (1.50)	63.5 (2.50)
2728 A, B, or C	38.1 (1.50)	88.9 (3.50)
2729 C	38.1 (1.50)	53.3 (2.10)

¹ "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

CERTIFICATE USA/0043/S-96, REVISION 15

The sources authorized by this certificate are only those that have been manufactured prior to January 1, 1985 in accordance with Monsanto Research Corporation Drawing Numbers: B2721-AA00, B2722-AA00, B2723-AA00, B2724-AA00, B2725-AA00, B2726-AA00, B2727-AA00, B2728-AA00, A2721-BA00, A2722-BA00, A2723-BA00, A2724-BA00, A2725-BA00, A2726-BA00, A2727-BA00, A2728-BA00, C2721-CA00, C2722-CA00, C2723-CA00, C2724-CA00, C2725-CA00, C2726-CA00, C2727-CA00, C2728-CA00, or C2729-CA00. Monsanto Research Corporation Drawing Numbers C2728-CA00 and C2729-CA00 are attached as examples.

3. Radioactive Contents - These sources consist of Americium-241 or Plutonium-238 as oxide in powder form mixed with a neutron producing target material (Be, B, Li, F, or C) in powder form. The maximum activity of each is as indicated in the following table:

Model Number	Maximum TBq (Ci) Content	Model Number	Maximum TBq (Ci) Content
2721 A	0.01 (0.3)	2726 B	0.59 (16)
2722 A	0.04 (1)	2727 B	1.74 (47)
2723 A	0.11 (3)	2728 B	2.78 (75)
2724 A	0.19 (5)	2721 C	0.01 (0.3)
2725 A	0.31 (8.5)	2722 C	0.05 (1.3)
2726 A	0.44 (12)	2723 C	0.09 (2.35)
2727 A	0.22 (6)	2724 C	0.21 (5.6)
2728 A	0.37 (10)	2725 C	0.42 (11.4)
2721 B	0.01 (0.4)	2726 C	0.65 (17.7)
2722 B	0.05 (1.4)	2727 C	1.78 (48)
2723 B	0.11 (2.9)	2728 C	2.89 (78)
2724 B	0.22 (6)	2729 C	1.28 (34.7)
2725 B	0.37 (10)		

4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on November 30, 2026. Previous editions which have not reached their expiration date may continue to be used.

CERTIFICATE USA/0043/S-96, REVISION 15


This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the October 11, 2021 petition by J.L. Shepherd & Associates, San Fernando, CA, and in consideration of other information on file in this Office.

Certified By:



November 22, 2021

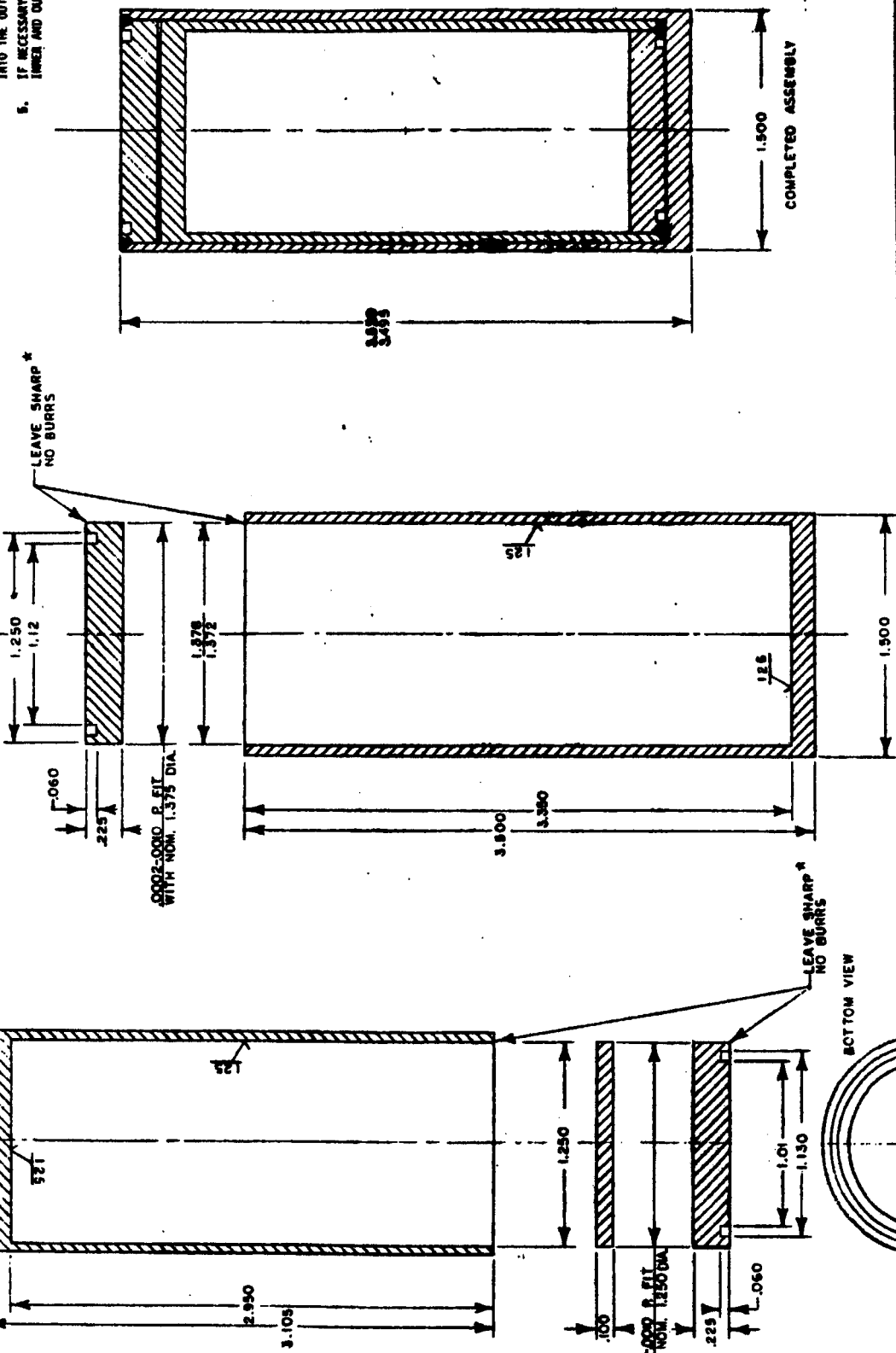
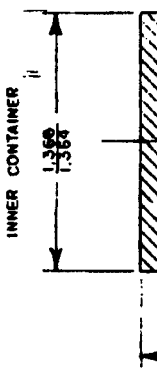
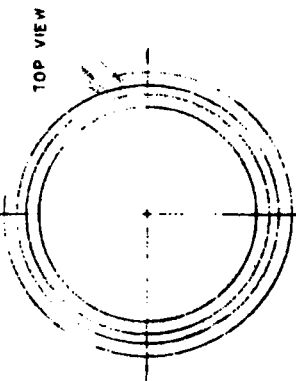
(DATE)

 William Schoonover
Associate Administrator for Hazardous
Materials Safety

Revision 15 - Issued to extend the expiration date.

ZONE	REV	DESCRIPTION	DATE	APPROVAL

- NOTES:
1. MIN WELD PENETRATION $\pm .045$ FOR EACH CONTAINER.
 2. UNLESS OTHER SPECIFIED: BREAK OUTSIDE CORNERS $\pm .010$ $\pm .0020$, RADIUS INSIDE CORNERS $\pm .010$.
 3. *INDICATES VISUAL INSPECTION IS ACCEPTABLE.
 4. INNER CAPSULE TO BE INSERTED WELDED END FIRST INTO THE OUTER CAPSULE.
 5. IF NECESSARY, S.S. SHIMS MAY BE PLACED BETWEEN INNER AND OUTER CONTAINER TO LIMIT MOVEMENT.



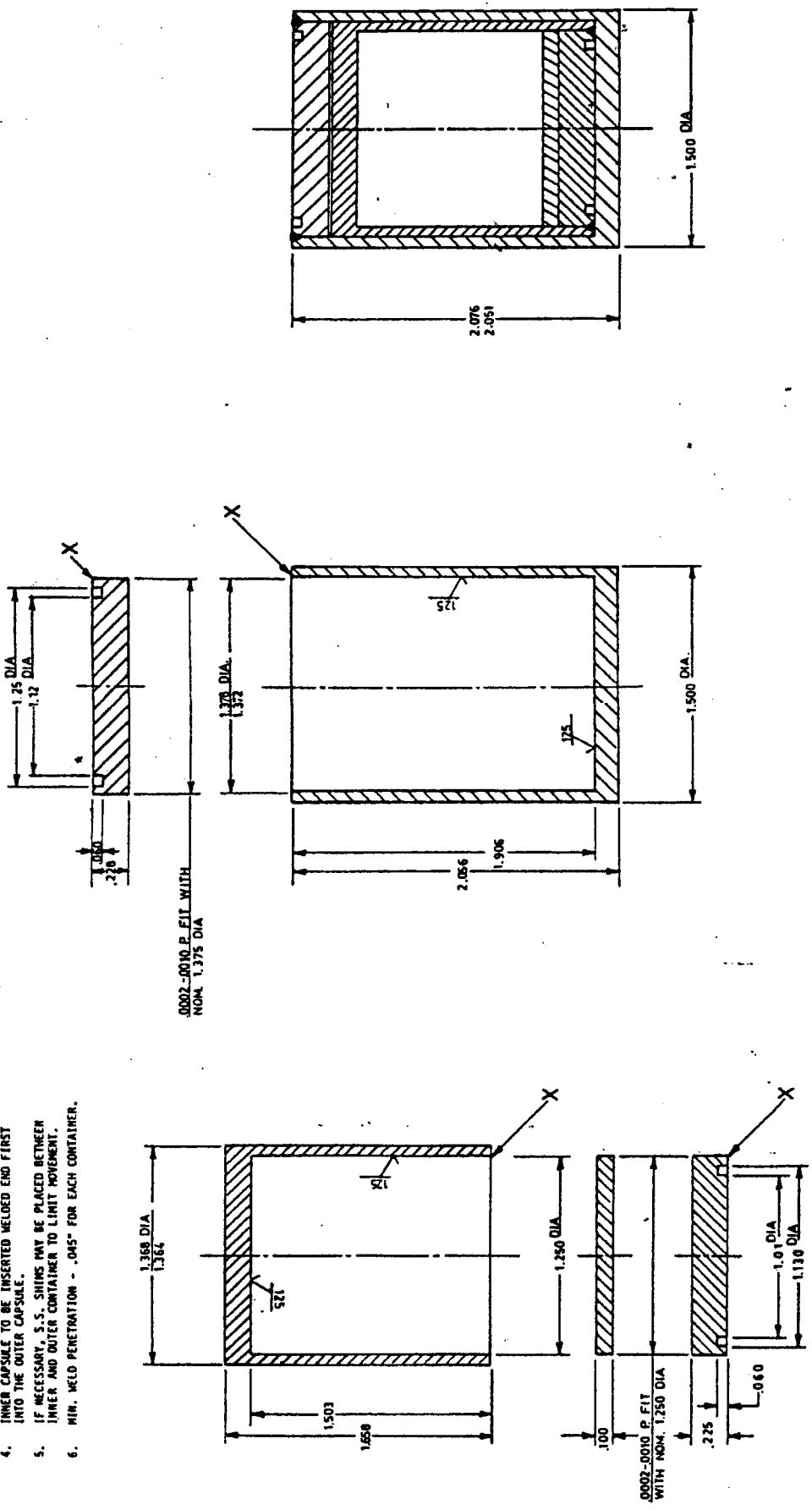
NOTICE

This drawing is the property of Monsanto Research Corporation and must be returned, without reproduction or duplication, at any time upon request, but in any event at completion of the work or job. While in the possession of the recipient, it must be properly safeguarded against reproduction or disclosure to anyone except those employees who are responsible for the work or job. The recipient must keep confidential, and require his (its) employees to keep confidential, the information contained hereon.

MONSANTO RESEARCH CORPORATION BATON LABORATORY BATON, LOUIS.		DRAWING NO. C2728-CA00	
NEUTRON SOURCE CONTAINER MODEL 2728-C		SHEET NO. 0	
DATE	BY	CHKD BY	APP'D BY
5-6-61	R.H.H.	J.G.H.	
DESIGNED	DRAWN	CHECKED	APPROVED
	H.A.M.		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		FRACTIONS	
TOLERANCES:		DECIMALS	
.XX = $\pm .02$.XXX = $\pm .005$	
.XXX BASIC $\pm .30$		ANGLES	
MATERIAL 304 S.S.		ALL SURFACES	
FINISH		SCALE 2:1 IMP CALD	

REV.	DATE	DESCRIPTION	DE.	APPROVAL

- NOTES:
- UNLESS OTHERWISE SPECIFIED:
BREAK OUTSIDE CORNERS .010 - .020"
RADIUS INSIDE CORNERS .010
 - ALL CORNERS DESIGNATED WITH AN X SHALL BE LEFT SHARP, NO BURRS.
 - *INDICATES VISUAL INSPECTION IS ACCEPTABLE.
 - INNER CAPSULE TO BE INSERTED WELDED END FIRST INTO THE OUTER CAPSULE.
 - IF NECESSARY, S.S. SHIMS MAY BE PLACED BETWEEN INNER AND OUTER CONTAINER TO LIMIT MOVEMENT.
 - MIN. WELD PENETRATION - .045" FOR EACH CONTAINER.



ASSEMBLY

OUTER CONTAINER

INNER CONTAINER

DIMENSIONS ARE IN INCHES & MILLIMETERS	
MS	2.2-2.2
FRAC	2.2-2.2
DEC	2.2-2.2
ANG	2.2-2.2
ALL SURFACES	2.2-2.2
MATERIAL	304 STAINLESS STEEL
UNLESS OTHERWISE SPECIFIED	
TOLERANCES:	
DECIMALS	FRACTIONS
.XX ± .01	1
.XXX ± .005	1
.XXXX BANG	1
ALL SURFACES	ψ
DRAWN HAM 7-TR	
CHECKED	
APPROVED	

MONSANTO RESEARCH CORPORATION
BATTON LABORATORY
BATTON, OHIO

NEUTRON SOURCE
CAPSULE MODEL 2729-C

REV. C2729-CA00 0



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1200 New Jersey Ave, SE
Washington, D.C. 20590

CERTIFICATE NUMBER: USA/0043/S-96

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